## Jump, Christine

From:

Michael Stephenson <mstephenson@cameron-cole.com>

Sent:

Monday, October 27, 2014 2:54 PM

To:

Jump, Christine

Cc:

SMITH, MARTIN L; Brady Gerber; sklaus@geostatenvironmental.com; Akhter Hossain;

Mostafa Kamal; Lininger, Don

Subject:

RE: CH Wichita Confirmation sampling

Attachments:

Confirmatory Sample RL-MDL - revised 102714.pdf

Hello Chris,

Attached please find the revised table. Thank you for your prompt attention to this request. Please call me if you have any questions or concerns.

Sincerely,

Mike Stephenson Principal Scientist Cameron-Cole, LLC 50 Hegenberger Loop Oakland CA 94621 office - 510.777.1864 mobile - 510.773.9895 mstephenson@cameron-cole.com

**From:** Jump, Christine [mailto:Jump.Chris@epa.gov]

Sent: Thursday, October 23, 2014 2:48 PM

To: Michael Stephenson

Cc: SMITH, MARTIN L; Brady Gerber; sklaus@geostatenvironmental.com; Akhter Hossain; Mostafa Kamal; Lininger, Don

Subject: RE: CH Wichita Confirmation sampling

The EPA approves Clean Harbors request to revise the previously approved confirmation sampling program. This revision reduces the analysis required under the IRM to include only VOCs by USEPA Method 8260 (including 1,4 dioxane by the SIM method) and 8 RCRA metals. Approval of this revision means that the *RCRA Soil Interim Remedial Measure* (IRM) Work Plan, Clean Harbors Wichita Facility is only addressing VOC and metal constituents identified above IAOs in previous investigations. This approval does not alter the sampling requirements for closure of the facility under the authority of KDHE. Please note that the approved reuse of concrete as backfill on site in areas excavated for the IRM does not exempt Clean Harbors from being required to collect final closure samples in those locations in the future, if necessary.

Please revise the table entitled Reporting Limits and Detection Limits, which was attached to the original request. The revised table should reflect the changes in this approval and be resubmitted to the EPA and KDHE.

Please contact me if you have any questions about this approval.

Chris Jump, L.G.

Waste Remediation and Permitting Branch



US EPA, Region 7 jump.chris@epa.gov (913) 551-7141

Mailing address: 11201 Renner Boulevard, Lenexa, KS 66219

From: Michael Stephenson [mailto:mstephenson@cameron-cole.com]

Sent: Tuesday, October 21, 2014 3:08 PM

To: Jump, Christine

Cc: SMITH, MARTIN L; Brady Gerber; sklaus@geostatenvironmental.com

Subject: CH Wichita Confirmation sampling

Hello Chris,

I am writing to request a revision to the approved confirmation sampling plan for the IRM currently being executed at the CH Wichita site.

As you are aware, there have been some changes in the regulatory approach to this IRM since our final response to comments on the IRM workplan in July 2014. The confirmation sampling approach outlined in the attached table was intended to satisfy both corrective action and closure concerns. Since that time, KDHE has indicated that they will not consider the subsurface data obtained through confirmation sampling for the purposes of closure. Rather, Clean Harbors will be required to sample for the full list of analytes that the facility is permitted to accept prior to going through final complete closure of the facility.

Previous work performed at the Site as presented in the IRM workplan and DRAFT RFI phase IV report have identified the presence of select COCs at concentrations exceeding interim action objectives. These COCs are comprised of several VOCs, three metals and one SVOC. Other compounds (pesticides, herbicides, pcbs) were not detected in any samples at concentrations exceeding IAOs. Considering that there is no evidence that these compounds are present in site soils at levels of concern, and that data collected at this time will not be considered in a future application for closure of the facility, Clean Harbors is requesting that pesticides, herbicides and PCBs be dropped from the confirmation sampling program. These constituents were previously proposed (and approved) to be analyzed in 10 % of confirmation samples.

The one SVOC that was detected at concentrations exceeding IAOs was aniline. This compound was detected in two building D samples collected from the upper 2 feet of the soil column and in both cases, the sample collected at deeper depths did not contain aniline at concentrations above laboratory detection limits. The soils with aniline exceeding IAOs will be excavated, and existing data within Building D adequately characterize the lateral and vertical distribution of aniline as extremely limited. For this reason, Clean Harbors is also requesting the SVOCs be eliminated from the confirmation sampling program.

In summary, Clean Harbors wishes to revise the confirmation sampling program to include only VOCs by USEPA Method 8260 and RCRA 8 metals. Confirmation samples analyzed for these compounds will be sufficient to confirm that the IAOs have been achieved for all compounds detected above IAOs in all previous site work.

Please call or email me with any questions or concerns. As the excavation is proceeding rather quickly, we appreciate your prompt attention to this matter.

Thank you,

Mike Stephenson Principal Scientist Cameron-Cole, LLC 50 Hegenberger Loop Oakland CA 94621 office - 510.777.1864 mobile - 510.773.9895 mstephenson@cameron-cole.com

## Reporting Limits and Detection Limits IRM Comfirmatory Samples Clean Harbors Wichita

| Compound                       | CAS No.    | RL/PQL | MDL | IAO        | Units          | Phase I | Phase II | Phase III | Phase IV |
|--------------------------------|------------|--------|-----|------------|----------------|---------|----------|-----------|----------|
| Volatile Organic Compounds (US |            |        |     |            |                |         |          |           |          |
| Acetone                        | 67-64-1    | 50     | 15  | 51600      | ug/kg          | X       | Χ        | Χ         | X        |
| Acrolein                       | 107-02-8   | 25     | 11  | NA         | ug/kg          | Χ       | Χ        | Χ         | X        |
| Acrylonitrile                  | 107-13-1   | 25     | 7.8 | NA         | ug/kg          | X       | X        | X         | X        |
| Benzene                        | 71-43-2    | 5      | 1   | 168        | ug/kg          | X       | X        | X         | X        |
| Bromobenzene                   | 108-86-1   | 5      | 1.1 | NA         | ug/kg          | Χ       | X        | Χ         | Χ        |
| Bromochloromethane             | 74-97-5    | 5      | 1.9 | NA         | ug/kg          | X       | Χ        | X         | X        |
| Bromodichloromethane           | 75-27-4    | 5      | 1   | NA         | ug/kg          | Χ       | Χ        | X         | X        |
| Bromoform                      | 75-25-2    | 5      | 1.1 | NA         | ug/kg          | X       | Χ        | X         | X        |
| n-Butylbenzene                 | 104-51-8   | 5      | 1   | 50900      | ug/kg          | X       | Χ        | X         | X        |
| sec-Butylbenzene               | 135-98-8   | 5      | 1   | 82700      | ug/kg          | X       | Χ        | Χ         | X        |
| tert-Butylbenzene              | 98-06-6    | 5      | 1   | 10000000   | ug/kg          | Χ       | X        | X         | X        |
| Chlorobenzene                  | 108-90-7   | 5      | 1   | 5100       | ug/kg          | Х       | X        | Χ         | Χ        |
| Chloroethane                   | 75-00-3    | 5      | 2.3 | 128000     | ug/kg          | X       | X        | X         | Х        |
| Chloroform                     | 67-66-3    | 5      | 1.1 | 850        | ug/kg          | Χ       | X        | Χ         | X        |
| o-Chlorotoluene                | 95-49-8    | 5      | 1   | NA         | ug/kg          | Х       | Х        | Х         | X        |
| p-Chlorotoluene                | 106-43-4   | 5      | 1   | NA         | ug/kg          | Х       | X        | X         | X        |
| 2-Chloroethyl vinyl ether      | 110-75-8   | 25     | 10  | NA         | ug/kg          | Х       | X        | X         | X        |
| Carbon disulfide               | 75-15-0    | 5      | 1   | 6710       | ug/kg          | X       | X        | X         | X        |
| Carbon tetrachloride           | 56-23-5    | 5      | 1.4 | 73.4       | ug/kg          | X       | X        | X         | X        |
| 1,1-Dichloroethane             | 75-34-3    | 5      | 1   | 269        | ug/kg          | X       | X        | X         | X        |
| 1,1-Dichloroethylene           | 75-35-4    | 5      | 1   | 85.9       | ug/kg          | X       | X        | X         | X        |
| 1,1-Dichloropropene            | 563-58-6   | 5      | 1.1 | NA         | ug/kg          | X       | X        | X         | X        |
| 1,2-Dibromo-3-chloropropane    | 96-12-8    | 5      | 2.1 | NA         | ug/kg          | X       | X        | X         | X        |
| 1,2-Dibromoethane              | 106-93-4   | 5      | 1.8 | NA         | ug/kg          | X       | X        | X         | X        |
| 1,2-Dichloroethane             | 107-06-2   | 5      | 1   | 60         | ug/kg          | X       | X        | X         | X        |
| 1,2-Dichloropropane            | 78-87-5    | 5      | 1   | 81.7       | ug/kg          | X       | X        | X         | X        |
| 1,3-Dichloropropane            | 142-28-9   | 5      | 1   | NA         | ug/kg          | X       | X        | X         | X        |
| 2,2-Dichloropropane            | 594-20-7   | 5      | 1.4 | NA         | ug/kg          | X       | X        | X         | X        |
| Dibromochloromethane           | 124-48-1   | 5      | 1   | NA         | ug/kg<br>ug/kg | X       | X        | X         | X        |
| Dichlorodifluoromethane        | 75-71-8    | 5      | 1.3 | NA         | ug/kg<br>ug/kg | X       | X        | ×         | X        |
| cis-1,2-Dichloroethylene       | 156-59-2   | 5      | 1.3 | 855        | ug/kg<br>ug/kg | X       | X        | X         | X        |
| cis-1,3-Dichloropropene        | 10061-01-5 | 5      | 1   | NA         | ug/kg<br>ug/kg | X       | X        | X         | X        |
| m-Dichlorobenzene              | 541-73-1   | 5      | 1   | NA         | ug/kg<br>ug/kg | X       |          | X         |          |
| o-Dichlorobenzene              | 95-50-1    | 5      | 1   | 48400      |                |         | X        |           | X        |
| p-Dichlorobenzene              | 106-46-7   | 5      | 1.1 | 5940       | ug/kg          | X       | X        | X         | X        |
| trans-1,2-Dichloroethylene     | 156-60-5   | 5      | 1.3 | 1220       | ug/kg          | X       | X        | X         | X        |
| trans-1,3-Dichloropropene      | 10061-02-6 | 5      | 1.5 |            | ug/kg          | X       | X        | X         | X        |
| 1,4-Dioxane (8260 SIM)         |            | 5      |     | NA<br>20.4 | ug/kg          | X       | X        | X         | X        |
| Ethylbenzene                   | 123-91-1   |        | 2   | 38.4       | ug/kg          | X       | X        | X         | X        |
| 05                             | 100-41-4   | 5      | 1   | 65600      | ug/kg          | X       | X        | X         | X        |
| 2-Hexanone                     | 591-78-6   | 25     | 4.9 | 140000     | ug/kg          | X       | X        | X         | X        |
| Hexachlorobutadiene            | 87-68-3    | 5      | 1   | 1100       | ug/kg          | X       | X        | X         | Х        |
| Isopropylbenzene               | 98-82-8    | 5      | 1   | 65100      | ug/kg          | X       | X        | X         | X        |
| p-Isopropyltoluene             | 99-87-6    | 5      | 1   | NA         | ug/kg          | X       | Χ        | X         | X        |
| 4-Methyl-2-pentanone           | 108-10-1   | 25     | 5   | 6690       | ug/kg          | X       | X        | X         | X        |
| Methyl bromide                 | 74-83-9    | 5      | 1.9 | NA         | ug/kg          | X       | X        | X         | Х        |
| Methyl chloride                | 74-87-3    | 5      | 2   | NA         | ug/kg          | X       | Х        | Χ         | X        |
| Methylene bromide              | 74-95-3    | 5      | 1.2 | NA         | ug/kg          | X       | X        | Χ         | X        |
| Methylene chloride             | 75-09-2    | 10     | 4   | 42.9       | ug/kg          | Х       | X        | Χ         | X        |
| Methyl ethyl ketone            | 78-93-3    | 25     | 7.5 | 24200      | ug/kg          | X       | Χ        | Χ         | X        |
| Methyl Tert Butyl Ether        | 1634-04-4  | 5      | 1   | 848        | ug/kg          | X       | Χ        | X         | X        |
| Naphthalene                    | 91-20-3    | 5      | 2   | 349        | ug/kg          | X       | Χ        | Χ         | Χ        |
| n-Propylbenzene                | 103-65-1   | 5      | 1   | 110000     | ug/kg          | X       | Χ        | X         | X        |

## Reporting Limits and Detection Limits IRM Comfirmatory Samples Clean Harbors Wichita

| Compound                    | CAS No.    | RL/PQL | MDL    | IAO    | Units | Phase I | Phase II | Phase III | Phase IV |
|-----------------------------|------------|--------|--------|--------|-------|---------|----------|-----------|----------|
| Styrene                     | 100-42-5   | 5      | 1      | 9340   | ug/kg | Х       | Х        | Х         | Х        |
| 1,1,1,2-Tetrachloroethane   | 630-20-6   | 5      | 1.1    | NA     | ug/kg | Χ       | Χ        | Χ         | X        |
| 1,1,1-Trichloroethane       | 71-55-6    | 5      | 1      | 2800   | ug/kg | X       | X        | X         | X        |
| 1,1,2,2-Tetrachloroethane   | 79-34-5    | 5      | 1.4    | 16     | ug/kg | X       | Χ        | Χ         | Χ        |
| 1,1,2-Trichloroethane       | 79-00-5    | 5      | 1.6    | 81     | ug/kg | Χ       | X        | X         | X        |
| 1,2,3-Trichlorobenzene      | 87-61-6    | 5      | 1.2    | NA     | ug/kg | X       | X        | X         | X        |
| 1,2,3-Trichloropropane      | 96-18-4    | 5      | 1.9    | NA     | ug/kg | Χ       | X        | Χ         | X        |
| 1,2,4-Trichlorobenzene      | 120-82-1   | 5      | 1.2    | NA     | ug/kg | X       | X        | X         | X        |
| 1,2,4-Trimethylbenzene      | 95-63-6    | 5      | 1      | 1070   | ug/kg | Χ       | X        | Χ         | Χ        |
| 1,3,5-Trimethylbenzene      | 108-67-8   | 5      | 1      | 5510   | ug/kg | Χ       | X        | X         | X        |
| Tetrachloroethylene         | 127-18-4   | 5      | 1.3    | 121    | ug/kg | X       | X        | X         | Χ        |
| Toluene                     | 108-88-3   | 5      | 1      | 51200  | ug/kg | Χ       | X        | X         | X        |
| Trichloroethylene           | 79-01-6    | 5      | 1      | 84.2   | ug/kg | X       | X        | X         | X        |
| Trichlorofluoromethane      | 75-69-4    | 5      | 1      | NA     | ug/kg | X       | X        | X         | X        |
| Vinyl chloride              | 75-01-4    | 5      | 1      | 20.5   | ug/kg | X       | X        | X         | X        |
| Vinyl Acetate               | 108-05-4   | 25     | 8      | NA     | ug/kg | X       | Χ        | Χ         | X        |
| m,p-Xylene                  |            | 10     | 1.6    | NA     | ug/kg | Χ       | X        | X         | X        |
| o-Xylene                    | 95-47-6    | 5      | 1.1    | 809000 | ug/kg | X       | X        | Χ         | Χ        |
| RCRA 8 Metals (USEPA Method | 6010/6020) |        |        |        |       |         |          |           |          |
| Arsenic                     | 7440-38-2  | 0.5    | 0.1    | 63.2   | mg/kg | X       | X        | Χ         | X        |
| Barium                      | 7440-39-3  | 10     | 0.05   | 277000 | mg/kg | X       | X        | X         | X        |
| Cadmium                     | 7440-43-9  | 0.2    | 0.025  | 965    | mg/kg | X       | X        | X         | X        |
| Chromium                    | 7440-47-3  | 0.5    | 0.05   | 111    | mg/kg | X       | X        | X         | Χ        |
| Mercury (7470/7471)         | 7439-97-6  | 0.041  | 0.0041 | 20     | mg/kg | Χ       | X        | X         | X        |
| Lead                        | 7439-92-1  | 1      | 0.08   | 1000   | mg/kg | Χ       | Χ        | X         | Χ        |
| Selenium                    | 7782-49-2  | 1      | 0.15   | 10200  | mg/kg | Χ       | Χ        | X         | X        |
| Silver                      | 7440-22-4  | 0.5    | 0.0325 | 10200  | mg/kg | X       | X        | X         | Χ        |

RL/PQL - Reporting Limit or Practical Quantitation Limit

MDL - Method Detection Limit

IAO - Interim Action Objective for compounds detected duirng previous RFI phases. No IAOs are proposed for compounds not detected to date ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

X - Denotes that confirmation sampling for the specified analyte will be performed

VOCs are to be analyzed in every confirmation sample collected

Metals are to be analyzed in all confirmation samples from the Northeastern Corner and Processing Area excavations

Metals are to be analyzed at a frequency of 10% of the VOC samples in other areas of the Site